

Please check the examination details below before entering your candidate information

Candidate surname						Other names					
Centre Number						Learner Registration Number					
Pearson BTEC Level 3 Nationals Extended Certificate, Foundation Diploma, Diploma, Extended Diploma											
Friday 17 May 2024											
Morning (Time: 2 hours)						Paper reference		31760H			
Information Technology UNIT 1: Information Technology Systems											
You do not need any other materials.										Total Marks	

Instructions

- Use **black** ink or ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and learner registration number.
- Answer **all** questions.
- Answer the questions in the spaces provided – there may be more space than you need.

Information

- The total mark for this paper is 90.
- The marks for **each** question are shown in brackets – use this as a guide as to how much time to spend on each question.

Advice

- Read each question carefully before you start to answer it.
- Try to answer every question.
- Check your answers if you have time at the end.

Turn over ►

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Answer ALL questions. Write your answers in the spaces provided.

1 A bookshop sells books.

(a) The bookshop uses input devices.

(i) Give **two** input devices the bookshop could use.

(2)

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(ii) Explain **two** benefits of using an automated stock control system for book sales.

(4)

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(b) The bookshop owner is considering purchasing off-the-shelf applications software for installation on the shop's computer system.

(i) Explain **two** benefits of using off-the-shelf applications software.

(4)

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(ii) Explain **two** drawbacks of using off-the-shelf applications software.

(4)

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(c) The bookshop uses an adapted user interface on its computer system. The owner is considering changing the user interface.

Discuss other types of available user interface and the factors that will affect choice.

You should consider:

- graphical
- command line
- menu based.

(6)

(Total for Question 1 = 20 marks)

2 JLG is a recruitment company that finds staff for local businesses.

- (a) The company has a local area network (LAN) and a server which holds a lot of personal data. The network devices use wired connections.

Explain **one** benefit of transferring data using a wired LAN.

(2)

- (b) The recruitment company uses a multi-user operating system on its LAN.

Explain **two** features of a multi-user operating system.

(4)

1

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(c) Device drivers are used by an operating system to manage peripheral devices.

Explain **two** ways device drivers assist the operating system in the management of peripheral devices.

(4)

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- (d) The recruitment company uses a firewall to protect data.
Describe how a firewall ensures data security.

(4)

(e) Backup software and compression software are installed on the LAN.

Explain the reasons for installing backup software and compression software.

(4)

Backup software

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Compression software

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(f) A firewall is one method that can be used to help keep data on the network secure.

Discuss other methods that can be used to keep data secure on the network.

You need to consider:

- encryption
- virus protection
- physical access controls.

(8)

(Total for Question 2 = 26 marks)

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3 A cinema company allows customers to book film tickets online by completing a booking form.

The customer inputs:

- the film they want to see
- the number of seats needed
- their personal details
- their payment details

If there are enough seats available and the payment is successful, the customer is sent an email confirmation of the booking.

If there are not enough seats available, the customer is asked to choose a different film.

If the payment is unsuccessful, the customer is asked to re-enter their payment details.

(a) Draw a flowchart to show the process of making an online booking.

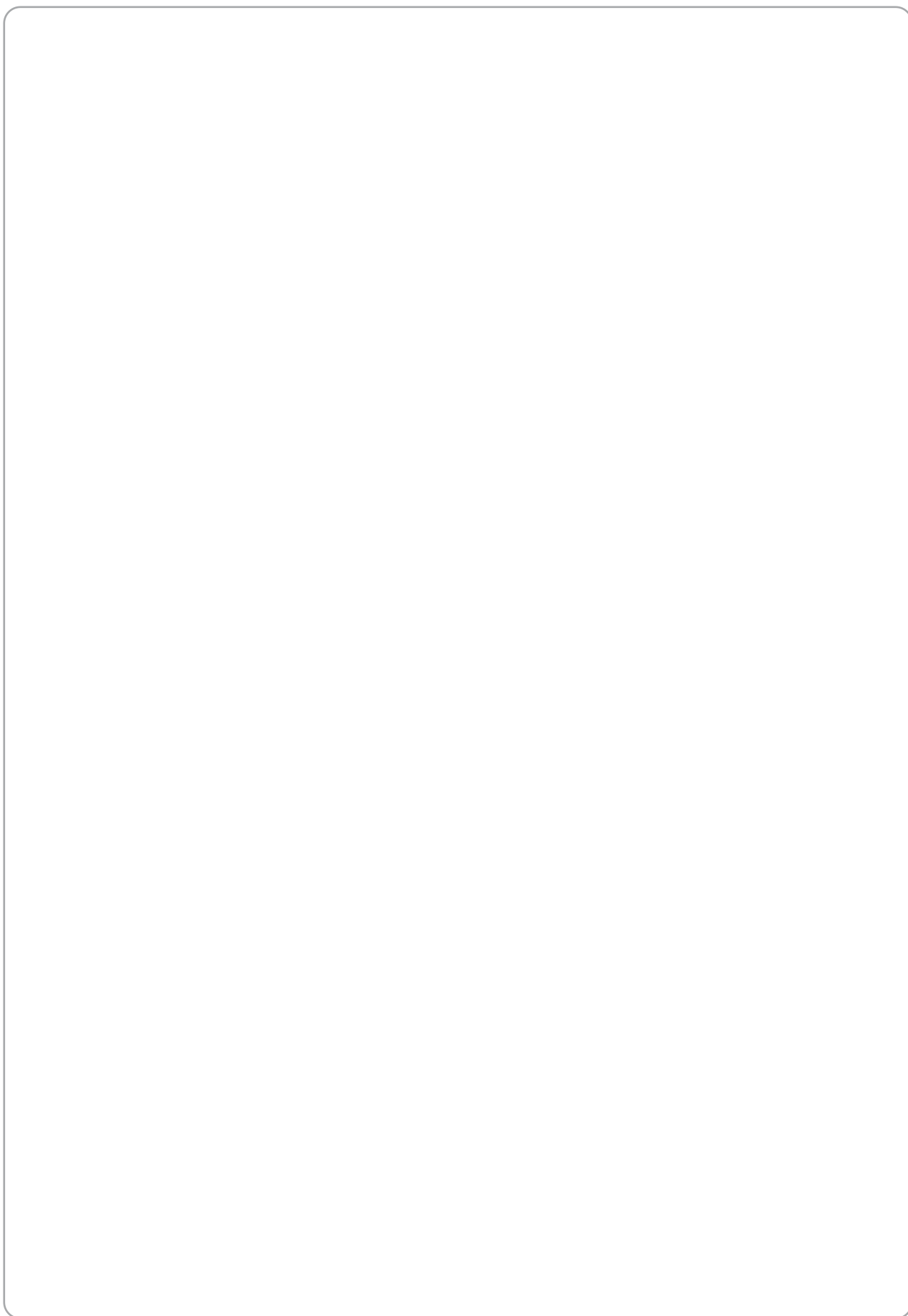
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Use this space to draw your diagram for Q3a.

(6)



(b) Customers use a credit or debit card to complete buying tickets online.

(i) Explain **two** protocols the cinema can use to keep payment details secure when customers make the transaction.

(4)

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- (c) Customers who book tickets online must create an account. Customers are asked to create a password for their account.

Describe how verification and validation would be used to ensure the password entered is suitable.

(4)

Verification

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Validation

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(d) The cinema's manager is updating the cinema's policies.

Discuss the legal issues and implications for the cinema and its staff when using IT systems.

You need to consider:

- display screen equipment regulations
- equality legislation
- disability discrimination legislation.

(8)

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(Total for Question 3 = 22 marks)

4 A civil engineering company has its head office in Manchester and regional offices around the UK. The company is considering the use of local and wide area networks.

(a) Discuss the features, use and purpose of local area networks (LANs) and wide area networks (WANs)

(10)

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(b) The civil engineering company uses desktop computers.

The owner is considering laptops with solid-state drives (SSDs) or hard-disk drives (HDDs) for storing data.

Analyse characteristics and implications of using laptops with SSDs or HDDs for storing data.

(12)

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(Total for Question 4 = 22 marks)

TOTAL FOR PAPER = 90 MARKS

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